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BUCHANAN INGERSOLL PC
1835 MARKET STREET, 14TH FLOOR
PHILADELPHIA, PA 19103-2985

EXAMINER

JOHNSON, JERRY D

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/858,188

Filing Date: May 15, 2001

Appellant(s): Helen M. Doherty et al.

MAILED
AUG 21 2005
GROUP 1700

Matthew P. McWilliams

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 18, 2005 appealing from the Office action mailed June 9, 2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection is substantially correct. The changes are as follows: The rejection of claims 16-19 under 35 U.S.C. 112, first paragraph, for failing to comply with the written description requirement is withdrawn.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

H1305	TOWNSEND et al.	May 3, 1994
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(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims stand 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend et al.

Townsend et al., United States Statutory Invention Registration H1305, teach a method of reformulating gasoline to reduce both hydrocarbon mass and reactivity of vehicle exhaust emissions and simultaneously reduce exhaust emissions of toxics, carbon monoxide and nitrogen oxides (column 1, line 65 to column 2, line 2). The gasoline reformulation method comprises (a) reducing the concentration of aromatic compounds in the gasoline; (b) reducing the concentration of olefinic compounds in the gasoline; (c) reducing the concentration of sulfur or

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sulfur-containing compounds in the gasoline; (d) reducing the 90 percent distillation temperature of the gasoline; and (e) adding an oxygenate to the gasoline (column 3, lines 20-27). It is preferred that the concentration of olefinic compounds is reduced in the reformulated gasoline in an amount ranging from about 10 to about 70 percent of the olefins in the unreformulated gasoline, and in another variation, olefinic compounds' concentration is more preferably reduced in the range of about 40 to about 60 percent (column 3, lines 37-43). It is preferred that the concentration of sulfur and sulfur-containing compounds is reduced in the reformulated gasoline in an amount ranging from about 65 to 90 percent in the unreformulated gasoline, and in another variation, it is more preferred to reduce the concentration of sulfur in the reformulated gasoline to an amount not exceeding 100 parts per million by weight (column 3, lines 43-51). The 90 percent distillation temperature of the gasoline is reduced in an amount ranging from about 10 percent to about 30 percent, and more preferably, the 90 percent temperature is reduced to a range from about 270°F. to about 310°F. (column 3, lines 61-65). An oxygenate is added in an amount to provide the gasoline, as reformulate, with an oxygen concentration in the range of about 1 to about 4 percent by weight oxygen, and more preferably in the range of about 2 to about 3 percent by weight oxygen (column 4, lines 4-9). Oxygenate compounds specific taught include, *inter alia*, the instantly claimed oxygenates (column 4, lines 4-26). In one variation, the reformulated gasoline is formulated to have a Reid Vapor Pressure in the range of about 6 to about 8 psia (column 6, lines 53-56). In one variation, the reformulated gasoline has a 50 percent distillation temperature in the range of about 180°F. to about 210°F. (column 7, lines 31-40). The octane number is in the range of about 86 to about 94 (column 7, lines 58-62).

In column 7, lines 1-26, Townsend et al. teach

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In one preferred variation of this embodiment of this invention, the reformulated gasoline comprises a concentration of normal paraffins in the range of about 7 to about 12 volume percent, and in another variation, more preferably in the range of about 8.5 to about 9.5 volume percent. In another preferred variation, the reformulated gasoline comprises a concentration of isoparaffins in the range of about 35 to about 60 volume percent, and in another variation, more preferably in the range of about 40 to about 55 volume percent. In still another variation, the reformulated gasoline comprise a concentration of naphthenes in the range of about 6 to about 10 volume percent, and in another variation, more preferably in the range of about 6.5 to about 8 volume percent.

In another variation of this embodiment of this invention, the aromatics comprise benzene and the reformulated gasoline comprises a concentration of benzene not exceeding about 2 volume percent, and in an even more preferred variation, the concentration of benzene is in the range of about 0.4 to about 1.0 volume percent. In another variation, the aromatics comprise aromatics with 8 or more carbon atoms per molecule and the reformulated gasoline comprises a concentration of aromatics with 8 or more carbon atoms per molecule not exceeding about 20 volume percent.

While Townsend et al. differ from the instant claims in not disclosing an example of a fuel composition having all of the instantly claimed properties, it would have been obvious to one having ordinary skill in the art at the time the invention was made to follow the above teachings and arrive at the instantly claimed fuel compositions.

(10) Response to Argument

Appellants argue

the Examiner has committed errors as a result of misreading the teachings of Townsend, and in applying the teachings of Townsend to the current case. As a threshold matter, Townsend et al. does not teach or suggest an olefin content of greater than about 15 percent, as recited in claim 16 of the current application. Applicants respectfully submit that Townsend teaches reduced concentrations of olefins in reformulated gasoline, but not increased concentrations. There is no implicit or explicit teaching or mention in Townsend of having increased concentrations of olefins, only reduced concentrations of olefins are described. (Brief, page 5).

On page 6 of the Brief, appellants argue

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[t]here is no motivation in Townsend to modify its teachings to produce a fuel with an olefins content greater than 15 percent. No motivation to do so in the art generally has been presented by Examiner. As will be shown below, the art at the time the claims on appeal were filed taught that reduction in olefin concentration is needed to produce low emission fuels. Even if motivation could be found in the art in general, the teaching would conflict with the teaching of Townsend that lower olefins contents are not only preferable, but are to be "in the range of about 4 to about 10 volume percent".

Further, appellants, citing select passages from several prior art references, argue "the totality of the prior art must be considered, and proceeding contrary to accepted wisdom in the art is evidence of nonobviousness" and, that "Townsend and the patents by Jessup, Scott et al. and Westland et al. explain the state of the relevant art at the time the current invention was made. The teachings from those inventions indicates that reduced olefin concentrations would be needed to reduce NOx and hydrocarbon emissions from automobile engines, and therefore there would not be some reasonable expectation of success." (Brief, page 9). Appellants' arguments lack merit.

As noted above, column 7, lines 1-26, Townsend et al. teach component concentration ranges for their gasoline as follows:

<u>Component</u>	<u>General Vol. %</u>	<u>Preferred Vol. %</u>
Normal paraffins	about 7 to about 12	about 8.5 to about 9.5
Isoparaffins	about 35 to about 60	about 40 to about 55
Naphthenes	about 6 to about 10	about 6.5 to about 8
Aromatics	less than about 20 (i.e., 0 to less than about 20)	

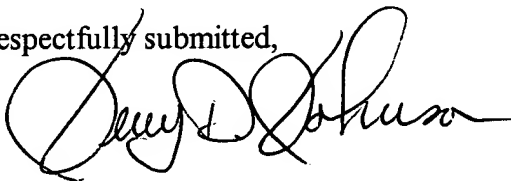
***Oygenate may be added in an amount to provide the reformulated gasoline with an oxygen concentration in the range of about 1 to about 4 percent by weight oxygen (column 7, lines 41-45).

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Since the sum of normal paraffins, isoparaffins, naphthenes, aromatics, oxygenates and olefins equals 100 volume percent, it is clear that the composition taught by Townsend et al. are not limited to olefin contents of "about 4 to about 10 volume percent" as argued. Clearly Townsend et al. contemplate compositions comprising "an olefins content of greater than about 15 volume percent." Furthermore, while the prior art generally teaches compositions having reduced olefin contents, none of the prior art cited by appellants teaches that gasoline composition must contain less than 15 volume percent olefins and, there is no evidence of record that the claimed value is critical or gives unexpected results. Accordingly, the claimed composition would have been obvious to one having ordinary skill in the art.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Jerry D. Johnson

Conferees:



Glenn Caidarola
Supervisory Patent Examiner
Technology Center 1700

NADINE G. NORTON
SUPERVISORY PATENT EXAMINER

